

REMARKS

By this amendment, applicant has amended the specification to insert appropriate headings therein and to provide consistent usage of reference characters. Applicant has amended the claims to more clearly define his invention by eliminating the indefiniteness problems noted by the Examiner in numbered sections 6 - 9 of the office action and to recite in claim 1 that the entire support material consists of combustible or consumable materials. See, e.g., original claim 2. Applicant has also amended the abstract as required by the Examiner in numbered section 4 of the office action.

Under separate cover, applicant is submitting herewith proposed amendments to Figure 4. These proposed amendments are consistent with the amendments made to the paragraph at page 4, lines 23 - 31 of applicant's specification. Approval of the proposed amendments and reconsideration and withdrawal of the objections to the drawings under 37 CFR 1.84(p)(4) in numbered sections 1 and 2 of the office action are requested.

In view of the foregoing amendments to the specification and abstract, reconsideration and withdrawal of the objections to the disclosure in numbered sections 3 and 4 of the office action are requested.

In view of the foregoing amendments to the claims, especially the amendments to claims 2 - 4, it is submitted all of the claims now in the application comply with the requirements of 35 USC 112, second paragraph. Accordingly, reconsideration and withdrawal of the rejection of claims 2 - 4 under 35 USC 112, second paragraph in numbered sections 5 - 9 of the office action are requested.

Claims 1 - 4 stand rejected under 35 USC 102(b) as allegedly being anticipated by or, in the alternative under 35 USC 103(a) as being obvious over

United States Patent No. 4,651,254 to Brede et al. Claims 1 - 4 also stand rejected under 35 USC 103 as being unpatentable over Brede et al, the Examiner also mentioning United States Patent No. 4,715,894 to Holtzman et al in support of the rejection. Applicant traverses these rejections and requests reconsideration thereof.

The present invention relates to a pyrotechnic primer for igniting propellant powder for sleeveless ammunition. The principal problem with previous design specifications for inductive primers for sleeveless ammunition has been with the non-combustible components of the receiving coil and the electrical ignition elements. This is particularly the case with relative small caliber diameters because unburned remains of the primer can form residues either in the cartridge chamber or in the barrel which will damage the weapon. See, e.g., page 1, lines 16 - 23 of applicant's specification.

The primer of the present invention has an ignition element and a coil in which the energy required for triggering is transferred by electromagnetic means (inductively). In order to avoid the problems heretofore associated with unburned remains of the primer, applicant situates the ignition element and coil on a common, flat, support material, the entire support material consisting of combustible or consumable materials, such as paper or nitro-cellulose.

The patent to Brede et al (of which applicant is a co-inventor) relates to inductive igniters with a secondary coil. As disclosed at column 1, lines 57 - 58 of Brede et al, the support material for the secondary coil is preferably a high-strength but flexible polyimide or a corresponding polyester. The Examiner interprets the disclosure at column 4, line 38 of Brede et al as suggesting that the entire support material is consumable. However, this interpretation is in error. As noted at column 4, lines 9 - 11 of Brede et al, the mechanical components 8-11 of the inductive igniter

can consist of combustible as well as non-combustible materials. Applicant, as co-inventor of the Brede et al patent, has indicated that the coil unit or pack 9 is non-combustible and that the term "combustible" relates not to the coil unit or pack 9, but to the supporting element 8, the support member 10 and the cap 11. On the other hand, according to the present invention, the entire support material for the ignition element and coil consists of combustible or consumable materials. It is submitted this is not disclosed in Brede et al.

In numbered section 16 of the office action, the Examiner refers to the Holtzman et al patent which relates to the use of immersion tin and tin alloys as a bonding medium for multiplayer circuits. However, absolutely nothing in Holtzman et al would have suggested that paper should be used as the support material or an ignition element or coil of a pyrotechnic primer.

Moreover, to the extent the Examiner is relying on the Holtzman et al patent, it is submitted the Examiner must include the Holtzman et al patent in the statement of the rejection.

For the foregoing reasons, it is submitted the presently claimed invention is patentable over Brede et al, alone or in combination with Holtzman.

Applicant notes the Examiner has cited the Hunter patent. However, since this patent was not applied in rejecting claims formerly in the application, further discussion of this patent is deemed unnecessary.

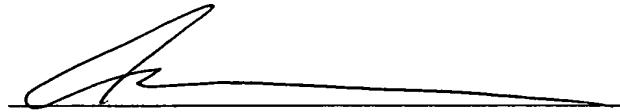
In view of the foregoing amendments and remarks, favorable reconsideration and allowance of all of the claims now in the application are requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli,

Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 306.41102X00),
and please credit any excess fees to such deposit account.

Respectfully submitted,

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Attachments